- wherein the introduction needle is used to insert the cannula, and
- wherein after insertion, the top portion is removed from the bottom portion,
- wherein the infusion device mating assembly configured to attach to the bottom portion of the infusion device, wherein the piercing needle configured to pierce the septum, and
- wherein when the infusion device mating assembly is attached to the bottom portion of the infusion device, the cannula is fluidly connected to the reservoir.
- 2. The infusion device system of claim 1, further comprising a predetermined length of tubing comprising a first end and a second end.
- 3. The infusion device system of claim 2, wherein the the first end of the tubing configured to attach to the bottom portion of the infusion device and the second end of the tubing configured to attach to the infusion device mating assembly.
- **4**. The infusion device system of claim **3**, wherein the second end of the tubing configured to attach to the piercing needle, wherein the tubing is fluidly connected to the reservoir.
- 5. The infusion device system of claim 1, further comprising an autoinserter.
- **6**. The infusion device system of claim **1**, further comprising a reusable housing assembly configured to removably attach to the disposable housing assembly.
- 7. The infusion device system of claim 6, wherein the reusable housing assembly comprising a volume sensor assembly.
- **8**. The infusion device system of claim **1**, wherein the disposable housing assembly comprising a pumping chamber.
  - 9. An infusion device system comprising:
  - a disposable housing assembly comprising:
    - an infusion device mating assembly attached to the disposable housing assembly comprising a piercing needle; and
    - a reservoir,
    - wherein the piercing needle fluidly connected to the reservoir;
  - a resusable housing assembly configured to removably attach to the disposable housing assembly; and
  - an infusion device comprising:
    - a top portion comprising an introduction needle; and
    - a bottom portion comprising a septum and a cannula, the top portion removably attached to the bottom portion,
    - wherein the introduction needle is used to insert the cannula, and
    - wherein after insertion, the top portion is removed from the bottom portion,

- wherein the infusion device mating assembly configured to attach to the bottom portion of the infusion device, wherein the piercing needle configured to pierce the septum, and
- wherein when the infusion device mating assembly is attached to the bottom portion of the infusion device, the cannula is fluidly connected to the reservoir.
- 10. The infusion device system of claim 1, further comprising a predetermined length of tubing comprising a first end and a second end.
- 11. The infusion device system of claim 10, wherein the the first end of the tubing configured to attach to the bottom portion of the infusion device and the second end of the tubing configured to attach to the infusion device mating assembly.
- 12. The infusion device system of claim 11, wherein the second end of the tubing configured to attach to the piercing needle, wherein the tubing is fluidly connected to the reservoir.
- 13. The infusion device system of claim 1, further comprising an autoinserter.
- 14. The infusion device system of claim 9, wherein the reusable housing assembly comprising a volume sensor assembly.
- 15. The infusion device system of claim 14, wherein the disposable housing assembly comprising a pumping chamber
  - 16. An infusion device comprising:
  - a top portion comprising an introduction needle; and
  - a bottom portion comprising a septum and a cannula, the top portion removably attached to the bottom portion, wherein the introduction needle is used to insert the cannula, and
    - wherein after insertion, the top portion is removed from the bottom portion,
    - wherein the bottom portion configured to attach to an infusion device mating assembly of an infusion pump assembly,
    - wherein when the infusion device mating assembly is attached to the bottom portion of the infusion device, the cannula is fluidly connected to a reservoir.
- 17. The infusion device of claim 16, further comprising a predetermined length of tubing comprising a first end and a second end.
- 18. The infusion device of claim 17, wherein the the first end of the tubing configured to attach to the bottom portion of the infusion device and the second end of the tubing configured to attach to the infusion device mating assembly.
- 19. The infusion device of claim 17, further comprising an autoinserter.
- 20. The infusion device of claim 17, wherein the bottom portion comprising a septum.

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